hobby outside of working hours must exist, to provide the joy that Guitry describes. I have yet to see a happily occupied person suffering from a neurosis.

SUMMARY

The neuroses have been reviewed from the hereditary and environmental viewpoints. Special emphasis has been placed on critical periods from birth to old age. Good mental hygiene in early life is introduced as a major factor in prevention. Once the disease has developed, psychotherapy, good physical health, and occupation will hinder its progress, and even enable a person to adapt himself again to his environment. Etiological factors have been traced to thoughtless attitudes on the part of parent, teacher and physician.

TWO CASES OF EARLY SECONDARY ABDOMINAL PREGNANCY WITH MASSIVE INTRA-ABDOMINAL HÆMORRHAGES

BY J. O. BAKER

Edmonton

ABDOMINAL pregnancy is such an interesting subject, presenting so many varying features, that to have two unusual cases within the space of two weeks was considered sufficiently noteworthy to report.

The two cases were of the early type, and both were complicated by immense abdominal hæmorrhages. Cornell's and Lash's[1] collective review of the subject includes 236 cases, but even in this article no mention can be found of similar severe abdominal hæmorrhage in early cases. Falk and Rosenbloom[2] reviewed 313 cases of extrauterine pregnancy occurring in 17 years at the Harlem Hospital, New York, among which there were 5 secondary abdominal pregnancies, but they apparently had no case of early abdominal pregnancy with massive hæmorrhage.

Secondary abdominal pregnancy, and most cases of abdominal pregnancy are such, is bound to become more rare, for with the early recognition of tubal pregnancy, aided by obstetrical tests such as the Ascheim-Zondek, etc., and the prompt application of surgery, the embyro has less chance to be discharged into the abdominal cavity through tubal rupture or tubo-abdominal abortion. If it happened to be discharged very young, with the damage that has likely taken place in its exit from the tube, it would not stand much chance of continuing its development. It would be more likely to start up a peritoneal reaction and be absorbed or encapsulated. It can be imagined that it might continue if it had active trophoblasts and a suitable soil such as an endometriomatous or a decidual area. Older embryos escaping with the amniotic sac intact, and the placenta continuing to occupy its location with maternal connection fairly well maintained, stand a better chance. The placenta could possibly develop and grow over and attach itself to other areas. Therefore these cases usually have their attachments low down, as did these two cases about to be described.

CASE 1

A young married primipara, aged 27, of low and unstable mentality, came to me while the pregnancy was probably still tubal, complaining of pain low in the left side of the abdomen. Her last menstrual period was August 7, 1935. She complained of some "spotting", but refused proper examination. She left the office with the idea that the purpose of the vaginal examination was to abort her. It was impossible to reason with her. A few days later one of the group was called to the house where she was employed as a maid, and found her complaining of slight abdominal pain and some bleeding. She was admitted to the Royal Alexandra Hospital (October 13, 1935), but again absolutely refused to have a vaginal examination. At this time her hæmoglobin was 67 per cent; red blood cells 4,100,000; white blood cells 18,800; polymorphonuclears 96 per cent; lymphocytes 4 per cent. Her sedimentation test showed a drop of 12 in 60 minutes. The Ascheim-Zondek test was positive. Tubal pregnancy was suspected. She became extremely violent mentally. During this time she complained of some abdominal discomfort, had a slightly darkened vaginal discharge, but refused to have any further examinations or blood counts. She insisted on leaving the hospital on October 23rd. Following this she came into the office on several occasions reporting that she was feeling much better, but would not submit to any examination. In the early morning of November 7th one of the group was called to see her in her room. She had been flowing slightly for two days and complained of some sharp spasms of pain in the abdomen. A hypodermic of morphine was given her, and she was again admitted to the Royal Alexandra Hospital. Her white blood count was 12,000; polymorphonuclears 78, and lymphocytes 22. She still complained of some cramp-like pains in the abdomen. She vomited twice during the morning, and during the next few days was most difficult to attend, refusing examination or medication, but took her food regularly and did not seem to be suffering from much abdominal pain. There was very little vaginal discharge. On the morning of November 11th, she was most antagonistic,

but had vomited, was nauseated, and appeared to be having quite severe abdominal pain. Her temperature dropped to 97° F.; she looked extremely pale; and her blood pressure was 92/60. Her hæmoglobin was 48 per cent; red blood cells 3,150,000; white blood cells 21,350; polymorphonuclears 96; lymphocytes 4 per cent. She was persuaded to submit to a pelvic examination, which could not be done satisfactorily, but a sensation of bulging was obtained in the cul-de-sac and a mass felt in the left pelvis; also some fresh bleeding from the uterus was noted. She was immediately matched for a transfusion but refused to have it and was taken to the operating room. Under anæsthetic pelvic examination confirmed the diagnosis of abdominal hæmorrhage. A mass about 5 cm. in diameter was felt in the left fornix. The *operation report* was as follows.

"A mid-line incision was made. On opening the peritoneum a large quantity of blood, both old and fresh, was apparent. As much as possible of this was suctioned out, citrated, and used for immediate autohæmofusion. Abdominal pregnancy, with sac complete down behind the uterus; placenta attached to the left tube, ovary, broad ligament, and sigmoid. On examination to determine the point of hæmorrhage the sac was accidentally ruptured and a live fetus delivered. Some of the placenta which seemed loose was removed, and a large curved clamp was placed on a pedicle-like piece which was attached to the sigmoid and peritoneum; which piece it seemed unwise to attempt to remove. This was sutured over and the clamp removed, thus practically controlling the free hæmorrhage. There was still some oozing on the left broad ligament and cul-de-sac. Some packing gauze was put in, the end left protruding from the abdominal wound."

The patient had received 500 c.c. of her own blood by this time, but as we anticipated trouble in post-operative treatment, 300 c.c. of her husband's blood was given before the effect of the pre-operative sedatives wore off. As expected, she refused to consent to any post-operative treatment, and was most indignant about having been operated on. She did practically as she wished regarding taking the fluids and so forth. Her temperature was only elevated above 100° F. once. Removal of the packing was started on the second day. Some decidua was passed from the uterus on the third day. The patient otherwise made an uneventful recovery and left hospital on the 16th day.

The *pathological report* was as follows. — Fetus about three months, part of placenta and ovarian tissue showing placental attachment — intra-abdominal pregnancy. Tube not differentiated on resection.—M. E. Hall, Pathologist.

The patient has been seen several times since leaving the hospital and submitted to a pelvic examination about January 1st. The pelvis seemed surprisingly clear and the uterus about normal in size and freely movable.

CASE 2

The second case was referred on November 23, 1935, para-2; the last menstrual period was October 3rd. On October 9th she had been admitted to the Royal Alexandra Hospital to the service of the doctor who later referred her to me. She complained of pain in the lower right quadrant of several days' duration. She had had a similar attack, she thought, twelve years before. Urine examination was negative. As pain and tenderness had persisted a diagnosis of subacute appendicitis was made and operation decided on. The *operation notes* read.—"Right rectus incision, appendix free, full and slightly congested; long mesentery".

As the woman was known to be pregnant, her last menstrual period being August 3, 1935, and nothing abnormal was apparent, the surgeon did not pull up the tubes or investigate the lower pelvis.

Pathological report. — "Chronic productive and catarrhal appendicitis, with scars", M. E. Hall, Pathologist.

The patient recovered, with no marked abdominal pain. On October 18th she was flowing slightly. She was out of bed on October 20th, and discharged on October 23rd.

She was re-admitted on November 11th, the complaint being uterine hæmorrhage accompanied with backache which had developed a few days after leaving hospital. She was vomiting on admission, and her pulse was of a fair quality. She complained of some difficulty in breathing and required a hypodermic of morphine, grain 1/6, for pain. Apparently an impacted uterus was considered to be the disturbing factor and an attempt at replacement was made. As considerable pain resulted from this an anæsthetic was given and the uterus pushed up with some difficulty. An emesis of several ounces once or twice per day continued for several days and she complained of some occasional abdominal discomfort. On November 14th the nurse records.—"No emesis today". She was apparently better for a few days following this, although she seemed to have had indefinite pains, as recorded, in the bladder, epigastric, and lumbar regions, also some headache. Summarizing from the 18th on, when the indications were that something was developing, the points of interest were as follows.

November 18th.—Although having slept soundly all night she vomited ten ounces of undigested food; temperature 99.4° F., pulse 90.

November 20th.—She was crying with abdominal pain more severe in nature and had codeine, 1 grain, several times; only a fair day.

November 21st.—The condition of the previous day was apparently more exaggerated. Pain in the abdomen was more severe; frequent emesis; difficulty in breathing. She had codeine, 1 grain, three times.

November 22nd.—The patient seemed very listless, distended, and complained of pain over the abdomen; nauseated.

November 23rd.—The abdomen was distended and tender. My report on requested consultation was as follows.

"Apparently the abdomen is filling up with blood, dull in the flanks, etc. The patient looks exsanguinated. Pelvic examination reveals bulging fornices. Uterus movable, but cervix up behind symphysis; mass to left."

Diagnosis. — Hæmorrhage in abdominal cavity. Possibly abdominal pregnancy.

Red blood cells 2,550,000; hæmoglobin 40 per cent; white blood cells 10,200; polymorphonuclears 90, lymphocytes 20. Blood pressure 90, systolic.

The patient was immediately matched for transfusion, and was given 500 c.c. of citrated blood. As soon as possible under ether anæsthesia a laparotomy was performed.

Operation report.—Abdomen distended in all quarters, and, on opening fascia, the peritoneum bulged through, distended with blood. Blood was suctioned out of the abdomen for autohæmofusion. Over 1,500 c.c. were obtained. Aside from this many old clots were turned out. Abdominal pregnancy, left lower abdomen, attached to the cul-de-sac, left broad ligament and sigmoid and posterior surface of the uterus. On examining for the attachment of the sac, which had apparently ruptured, a live fetus, about sixteen weeks, was brought up and a portion of the placenta unfortunately detached. Four pieces of large packing gauze were immediately put down into the lower pelvis, the ends brought out through abdominal incision, hoping to control the bleeding from the placental site, which was very profuse, and the abdomen rapidly closed as patient's condition was now bad. Time of

operation: twenty-five minutes. During this time she was being autohæmotransfused, and this was continued until she had been given 500 c.c.

Her condition improved somewhat. Systolic blood pressure, which had been down to 65 during operation, went above 100; then oozing was noted around the packing protruding from the abdominal wound, and the patient's condition indicated she was bleeding again; blurring of vision, weak pulse, air-hunger. Her blood pressure would not register and she died four hours after operation. *Pathological report.* — "Fetus and placenta about three months", M. E. Hall, Pathologist.

It is interesting to note that both fetuses were located in the left lower abdomen, and to conjecture how much this had to do with the hæmorrhages. The bleeding in the first case certainly was not from examination or manipulation, and the second patient survived manipulation, etc., for several days.

Since the preparation of this article the June number of the *American Journal of Obstetrics and Gynæcology* has come to hand, and Reel and Lewis[3] of the Department of Gynæcology, Ohio State University, report 10 cases of secondary abdominal pregnancy occurring in their service in seven and one-half years. About 4 of these were early, in the first trimester of pregnancy or slightly later. Among these early cases they apparently had none with massive abdominal hæmorrhage. In their 10 cases 6 were located in the left lower abdomen, an indication of a possible tendency for secondary abdominal pregnancies to develop there.

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AN INTERESTING FAMILY HISTORY OF APPENDICITIS

BY G. G. LECKIE, M.D., L.M.C.C.

Lucky Lake, Sask.

THIS is an unusual history of appendicitis in one family.

The father's father died in 1885 at the age of 50, from "inflammation of the bowels", now known to have been appendicitis. The other coeval relations died in old age from unknown causes.

The father died in 1926, aged 52. He had had attacks of "indigestion" off and on for several years. In 1926 during an attack which was diagnosed as "indigestion" by a doctor, he returned home several miles in the country, became worse, and came into hospital with generalized peritonitis. A drainage operation only was done. Six days later he developed phlebitis in the left leg and died.

The mother, aged 58, has had frequent attacks of abdominal pain with vomiting. The pain is mostly in the lower right side but she has never consulted a doctor regarding it.

Daughter M. died in 1899, aged 15, after illness for several days. She died on her way to hospital. A post-mortem showed a ruptured appendix as the cause. Daughter C., aged 35, married, has had several attacks of abdominal pain which were twice diagnosed as appendicitis by different doctors — once this year. Daughter B., aged 33, married, has had a severe attack this year, diagnosed as appendicitis by her doctor. She refused operation. Daughter R. died at the age of 6 months, 1904, from "dysentery". Daughter B., aged 30, at nine years of age had a severe illness and was then said to be too sick to operate upon (she then lived fifty miles from a hospital). Ever since she has had pain in the side with "stomach trouble". At operation this year she had a short, thick and inflamed appendix (half sloughed away) with omental adhesions to pelvic wall; recovery. Son R., aged 27, has no history of abdominal complaints. Son J., aged 25, has had appendicectomy elsewhere in 1927. Daughter D, aged 22, in 1934 came into hospital with pelvic peritonitis. She had appendicectomy and drainage, and recovered. Son F., aged 20, had acute appendicitis this last September. Appendicectomy was done, with uncomplicated recovery. Daughter, aged 18, last year had a subacute attack of appendicitis which subsided. Daughter M., aged 18, has no history of abdominal complaints. Daughter A., aged 15, in 1933 came to hospital with acute appendicitis and peritonitis (localized). Appendicectomy with drainage was done, followed by recovery.

Questions repeatedly asked attending physician by family are: Is appendicitis hereditary? What can be done to prevent it? Should we all have an appendicectomy? What are the answers in the face of this history?